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10/738,418	12/17/2003	Shigeru Sugaya	7217/71464	8325

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EXAMINER	
SOL, ANTHONY M	

ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/738,418	SUGAYA, SHIGERU	
	Examiner	Art Unit	
	Anthony Sol	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *5/24/2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 11-14 are rejected under 35 U.S.C. 101 because they claim a computer-readable program. The phrase "computer-readable-medium" is the accepted language in computer-processing related claims (see MPEP 2106.01). An excerpt from the MPEP 2106.01 is recited below:

> Since a computer program is merely a set of instructions capable of being executed by a computer, the computer program itself is not a process and USPTO personnel should treat a claim for a computer program, without the computer-readable medium needed to realize the computer program's functionality, as nonstatutory functional descriptive material.

Appropriate corrections are required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-2 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "increasing said receiving slots" in line 12. It is not

clear what is being increased – the size of the receiving slot, the number of receiving slots of the plurality of receiving slots, or the number of the receiving slots set by the receiving slot setting means?

Claim 2 recites the limitation "said plurality of receiving slots" in line 9. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Pub. No. US 2003/0012176 A1 ("Kondylis").

Regarding claims 1, 3, 6, 8, 11, and 12,

Kondylis shows in fig. 1 a frame setting means (para. 48, *data processing system, software, and computer program product*) for setting a frame period and a slot as predetermined time units)(also see figs. 3, 9).

Kondylis further shows in fig. 1 receiving slot setting means (para. 48, *data processing system, software, and computer program product*) for setting at least one receiving slot among a plurality of receiving slots received during said frame period

(para. 45, *unicast frame structure includes a plurality of signaling minislot triplets, each of which provide an opportunity for nodes to compete for the reservation of at least one data slot, depending on the needs of a particular transmission;* para. 58, *The transmitters/receivers with which the nodes are assumed to be equipped are half-duplex. In other words, they can either transmit or receive at a given instant, but cannot do both simultaneously).*

Kondylis still further shows in fig. 1 notification means (fig. 1, para. 48, *data processing system, software, and computer program product*) for notifying information of said receiving slot set by said receivinq slot settinq means via a beacon signal (para. 69, *the node, at each data slot reserved for reception, sends a receive beacon containing the identity of the node for which the reservation was made).*

Kondylis still further shows in fig. 1 slot increasing means (fig. 1, para. 48, *data processing system, software, and computer program product*) for increasing said receiving slots, when receiving a signal from another radio communication apparatus at said receiving slot (para. 54, *Finally, the technique continuously monitors the input traffic rate so that it can increase or decrease the reserved bandwidth based on traffic fluctuations)*

In addition for claims 3, 8 and 12, Kondylis discloses in para. 45, *The unicast frame structure includes a plurality of signaling minislot triplets, each of which provide an opportunity for nodes to compete for the reservation of* ***at least one data slot*** *(*claimed minimum of one).

Regarding claims 2 and 7,

Kondylis shows in fig. 1 receiving means (para. 48, *data processing system, software, and computer program product*) for receiving a beacon signal from another radio communication apparatus (para. 67, *the transmitting node, at each data slot reserved for transmission, awaits* ***reception*** *of a receive beacon containing the identity of the transmitting node in the receive beacon minislot 316 of data slots 314 for which a reservation was made by the transmitting node*; see also para. 59 and fig. 3, *RB 316, receive beacon minislot 316...These minislots and their respective signals are used by the receiving nodes that have already reserved the specific slot).*

Kondylis further shows in fig. 1 receiving slot detection means (para. 48, *data processing system, software, and computer program product*) for detecting a receiving slot of said other radio communication apparatus from said received beacon signal (para. 67, *the transmitting node, at each data slot reserved for transmission, awaits reception of a receive beacon containing the identity of the transmitting node in the receive beacon minislot 316 of data slots 314 for which a reservation was made by the transmitting node*; see also para. 59 and fig. 3, *RB 316, receive beacon minislot 316...These minislots and their respective signals are used by the receiving nodes that have* ***already reserved the specific slot****).*

Kondylis still further shows in fig. 1 slot increasing means (para. 48, *data processing system, software, and computer program product*) for increasing said plurality of receiving slots at a timing that does not coincide with the receiving slots detected by said receiving slot detection means (para. 54, *Finally, the technique*

continuously monitors the input traffic rate so that it can increase or decrease the reserved bandwidth based on traffic fluctuations).

Regarding claims 4, 9, and 13,

Kondylis shows in fig. 1 receiving means (para. 48, *data processing system, software, and computer program product*) for receiving a beacon signal from another radio communication apparatus (para. 67, *the transmitting node, at each data slot reserved for transmission, awaits* ***reception*** *of a receive beacon containing the identity of the transmitting node in the receive beacon minislot 316 of data slots 314 for which a reservation was made by the transmitting node*; see also para. 59 and fig. 3, *RB 316, receive beacon minislot 316...These minislots and their respective signals are used by the receiving nodes that have already reserved the specific slot).*

Kondylis further shows in fig. 1 receiving slot detection means (para. 48, *data processing system, software, and computer program product*) for detecting a receiving slot of said other radio communication apparatus from said received beacon signal (para. 67, *the transmitting node, at each data slot reserved for transmission, awaits reception of a receive beacon containing the identity of the transmitting node in the receive beacon minislot 316 of data slots 314 for which a reservation was made by the transmitting node*; see also para. 59 and fig. 3, *RB 316, receive beacon minislot 316...These minislots and their respective signals are used by the receiving nodes that have* ***already reserved the specific slot****).*

Kondylis still further shows in fig. 1 transmitting means 106 (para. 48, *data processing system, software, and computer program product*) for transmitting information via a new receiving slot when a change occurs at said receiving slot, after information is transmitted against a receiving slot of said another radio communication apparatus (para. 53, *The technique provides for an initial bandwidth reservation, a signaling technique for protecting reserved slots, and a* ***triggering*** *technique for* ***changing*** *the level of bandwidth reserved based on the measured traffic rate;* para. 54, *Finally, the technique continuously monitors the input traffic rate so that it can increase or decrease the reserved bandwidth based on traffic fluctuations).*

Regarding claims 5, 10, and 14,

Kondylis shows in fig. 1 a frame setting means (para. 48, *data processing system, software, and computer program product*) for setting a frame period and a slot as predetermined time units)(also see figs. 3, 9).

Kondylis further shows in fig. 1 receiving slot setting means (para. 48, *data processing system, software, and computer program product*) for setting at least one receiving slot among a plurality of receiving slots received during said frame period (para. 45, *unicast frame structure includes a plurality of signaling minislot triplets, each of which provide an opportunity for nodes to compete for the reservation of at least one data slot, depending on the needs of a particular transmission;* para. 58, *The transmitters/receivers with which the nodes are assumed to be equipped are half-*

duplex. In other words, they can either transmit or receive at a given instant, but cannot do both simultaneously).

Kondylis still further shows in fig. 1 notification means (fig. 1, para. 48, *data processing system, software, and computer program product*) for notifying information of said receiving slot set by said receivinq slot settinq means via a beacon signal (para. 69, *the node, at each data slot reserved for reception, sends a receive beacon containing the identity of the node for which the reservation was made).*

Kondylis still further shows in fig. 3 said notification means ACK 320 notifies a reception acknowledgement when receiving a signal from another radio communication apparatus at said receiving slot set by said receivinq slot setting means via a beacon (para. 67).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Stine (US20050190784A1) teaches access protocol for wireless ad hoc networks using synchronous collision resolutions.

Olkkonen (US6842460B1) teaches ad hoc network discovery menu.

Liu (US7103371B1) teaches dynamic voice reservation within wireless networks.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Sol whose telephone number is (571) 272-5949. The examiner can normally be reached on M-F 7:30am - 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HASSAN KIZOU
SUPERVISORY PATENT EXAMINER
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AMS

6/20/2007